

Claims

- ✓ 1. A bifunctional protein comprising:
- 1) an antigen binding domain derivable from a monoclonal antibody directed against a suitable antigen on a tumor cell,
 - 2) a hinge region comprising from about 40 to about 200 amino acids, and
 - 3) a functional zeta (ζ) chain derivable from the T-cell antigen receptor (TCR).
- ✓ 2. A DNA encoding a bifunctional protein comprising:
- 1) an antigen binding domain derivable from a monoclonal antibody directed against a suitable antigen on a tumor cell,
 - 2) a hinge region comprising from about 40 to about 200 amino acids, and
 - 3) a functional zeta (ζ) chain derivable from the T-cell antigen receptor (TCR).
- Sub B1 3. A DNA according to claim 2 encoding a protein wherein the antigen binding domain is a single chain antibody, particularly the single chain antibody designated FRP5 (scFv(FRP5)).
- A 4. A DNA according to claim 2 or 3 encoding a protein wherein the hinge region is an immunoglobulin-like hinge region.
- A 5. A DNA according to claims 2 to 4 encoding a protein wherein the functional ζ chain comprises the transmembrane and the cytoplasmic domain.
- A 6. A host cell expressing the DNA of any of claims 2 to 5.
7. A host cell according to claim 6 which is a cytotoxic lymphocyte (CTL).
8. A process for lysing selected tumor cells comprising contacting said tumor cells with CTL producing the protein of claim 1.
- A 9. A process for endowing a CTL with a defined, MHC-independent and MHC-unrestricted tumor cell specificity comprising introducing into said CTL a DNA according to claim 2 to 4.
10. A method for the production of a protein according to claim 1 comprising culturing a

of catalytic DNA encoding said protein

A host cell ~~of claim 6~~ under conditions which allow the expression of a DNA encoding said protein.

A 11. A composition-of-matter comprising a host cell according to claim 6 ~~or 7~~.

12. A method of treating cancer comprising the use of a host cell according to claim 7.

13. CTL according to claim 7 for use in a method of treating cancer.

14. Polyclonal or monoclonal antibody specific for a protein according to claim 1.

15. Vector comprising a DNA according to claims ~~2 to 5~~

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